CLAIMS

I (We) claim:

1. A cross link system for stabilizing and connecting a pair of spinal rods comprising a bar having a longitudinal axis with a first connector on one end and a second connector on the other end, said first connector having a first groove transverse to said longitudinal axis of said bar for passage of a spinal rod, a first lock mounted on said first connector with a first actuator arm adapted to extend into said first groove, said first arm movable to obstruct said first groove to frictionally engage said first connector and one of the spinal rods, said second connector having a second groove transverse to said longitudinal axis of said bar for passage of another spinal rod.

2. A cross link system of claim 1 wherein a second lock is mounted on said second connector with a second actuator arm adapted to extend into said second groove, said second arm shaped to obstruct said second groove to frictionally engage said second connector and another of the spinal rods.

3. A cross link system of claim 1 wherein said first groove has opposing side walls, a channel in one of said side walls, said first lock being rotatable to move said first actuator arm, said first actuator arm disposed in said channel, said first actuator arm having a first cam surface whereby rotation of said first actuator arm moves said first

cam surface into said first groove obstructing said first groove.

4. A cross link system of claim 2 wherein said second groove has opposing side walls, a channel in one of said side walls, said second lock being rotatable to move said second actuator arm, said second actuator arm disposed in said channel, said second actuator arm having a second cam surface whereby rotation of said second actuator arm moves said second cam surface into said second groove obstructing said second groove.

5. A cross link system of claim 3 wherein said second groove has opposing side walls, a channel in one of said side walls, said second lock being rotatable to move said second actuator arm, said second actuator arm disposed in said channel, said second actuator arm having a second cam surface whereby rotation of said second actuator arm moves said second cam surface into said second groove obstructing said second groove.

6. A cross link system of claim 5 wherein said one of said opposing side walls is reinforced in said first groove and said second groove.

7. A cross link system of claim 1 wherein a first key is movably mounted on said first connector in contact with said first lock, said first key blocking said first actuator arm

from disengagement when said first actuator arm obstructs said first groove.

8. A cross link system of claim 7 wherein said first connector has a counter sunk bore, said first lock located in said counter sunk bore, said first key threaded onto said first actuator arm.

9. A cross link system of claim 2 wherein a second key is movably mounted on said second connector in contact with said second lock, said second key blocking said second actuator arm from disengagement when said second actuator arm obstructs said second groove.

10. A cross link system of claim 9 wherein said second connector has a counter sunk bore, said second lock located in said counter sunk bore, said second key threaded onto said second actuator arm.

11. A cross link system of claim 1 wherein said bar comprises a first shaft and a second shaft, said first shaft and said second shaft joined by a pin, said pin having a U-shape with upstanding free ends supporting a portion of said first shaft, said second shaft having a bore, said free ends of said pin passing through said bore, a fastener engaging said free ends and said bore securing said pin and said first shaft and said second shaft together.

12. A cross link system of claim 2 wherein said bar comprises a first shaft and a second shaft, said first shaft and said second shaft joined by a pin, said pin having a U-shape with upstanding free ends supporting a portion of said first shaft, said second shaft having a bore, said free ends of said pin passing through said bore, a fastener engaging said free ends and said bore securing said pin and said first shaft and said second shaft together.

13. A cross link system of claim 11 wherein said first shaft has a portion of reduced thickness along said longitudinal axis adjacent to said bore in said second shaft, said reduced thickness defined by a shoulder on each end, a piston located in said reduced thickness and extending into said bore, said piston having opposed flanges extending along said reduced thickness, said flanges adapted to contact said shoulders during relative movement of said first shaft and said second shaft in said longitudinal axis and translate shear forces to said piston.

14. A cross link system of claim 12 wherein said first shaft has a portion of reduced thickness along said longitudinal axis adjacent to said bore in said second shaft, said reduced thickness defined by a shoulder on each end, a piston located in said reduced thickness and extending into said bore, said piston having opposed flanges extending along said reduced thickness, said flanges adapted to contact said shoulders during relative movement of said first shaft and said second shaft in said longitudinal axis and translate shear forces to said piston.

15. A cross link system for stabilizing and connecting a pair of spinal rods comprising a bar having a longitudinal axis with a first connector on one end and a second connector on the other end, said first connector having a first groove transverse to said longitudinal axis of said bar for passage of a spinal rod, a first lock mounted on said first connector with a first actuator arm adapted to extend into said first groove, said first arm movable to obstruct said first groove to frictionally engage said first connector and one of the spinal rods, said second connector having a second groove transverse to said longitudinal axis of said bar for passage of another spinal rod, a second lock is mounted on said second connector with a second actuator arm adapted to extend into said second groove, said second arm shaped to obstruct said second groove to frictionally engage said second connector and another of the spinal rods, said bar comprises a first shaft and a second shaft, said first shaft and said second shaft joined by a pin, said pin having a U-shape with upstanding free ends supporting a portion of said first shaft, said second shaft having a bore, said free ends of said pin passing through said bore, a fastener engaging said free ends and said bore securing said pin and said first shaft and said second shaft together, a piston located between said upstanding free ends and extending into said bore, said piston having opposed flanges extending along said first and second shaft.

16. A cross link system of claim 15 wherein said first shaft has a portion of reduced thickness along said longitudinal axis adjacent to said bore in said second shaft, said reduced thickness defined by a shoulder on each end, said piston located in said

reduced thickness and extending into said bore, said flanges adapted to contact said shoulders during relative movement of said first shaft and said second shaft in said longitudinal axis and translate shear forces to said piston.

17. A cross link system of claim 16 wherein a first key is movably mounted on said first connector in contact with said first lock, said first key blocking said first actuator arm from disengagement when said first actuator arm obstructs said first groove, a second key is movably mounted on said second connector in contact with said second lock, said second key blocking said second actuator arm from disengagement when said second actuator arm obstructs said second groove.